Biomechanical constraints remain major risk factors for low back pain

Prospective study among French workers

RAMOND-ROQUIN A1,2, PETIT LE MANACH A3, BODIN J4, SERAZIN C1, PAROT E1,3, HA C4, ROQUELAURE Y1,5
1 Laboratory of Ergonomics and Epidemiology in Occupational Health, University of Angers ; 2 Department of General Practice, University of Angers ; 3 Center of Clinical Research, University Hospital of Angers ; 4 Institute of Health Surveillance, Saint-Maurice ; 5 Department of Occupational Health, University of Angers

aline.ramond@univ-angers.fr

INTRODUCTION

Low back pain (LBP) in France: A major public health problem

One in two adults suffer from LBP at least once a year

Direct costs for chronic LBP: ~ 715 € per patient every 6 months

Impact on occupational settings:
LBP = the most frequent reason for sick leave

OBJECTIVE

Prospective modelling of the risk of LBP in the French male working population

RESULTS

Study population:

2002/2005 2161 male workers (first self-administered questionnaire)
Age, occupations and economic sectors = regional distribution
Unreachable people (n=146: death/unknown address)
Unanswered people (n=702)

2007/2009 1313 men (second self-administered questionnaire)
Prevalence LBP during the last 7 days: 30%

Final multivariate model (n=1255 due to missing data):

RISK FACTORS OR (IC 95)†
Frequent bending
(more than 2 hours daily)
No
Forward
Sideways
Both
1.45 (1.07-1.97)
1.78 (0.74-4.27)
2.13 (1.52-3.00)
Driving industrial vehicles
Never
Occasionally/Often
1.35 (1.00-1.81)
Working more hours than officially planned
No
Yes
1.38 (1.05-1.81)
Low support from supervisors
No
Yes
1.35 (1.02-1.79)
Low skill discretion
No
Yes
1.28 (0.95-1.72)

† Odds-ratios for LBP and confidence intervals at 95%

DISCUSSION & CONCLUSION

Prospective study; diversified cohort of male workers; numerous risk factors

Useful and relevant to the development of public health policy for workers.

Current research on LBP focus on psychosocial factors.

However biomechanical constraints (frequent bending, driving industrial vehicles) remain major risk factors that deserve to be considered in primary prevention!

REFERENCES

3 Caisse Nationale d’Assurance Maladie - Travailleurs Salariés.